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| 10/681,087 | 10/07/2003 | Hitoshi Hashimoto | 03612/LH | 6238 |

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EXAMINER

HENDERSON, ADAM

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

06/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/681,087

Applicant(s).

HASHIMOTO ET AL.

Examiner

Adam L. Henderson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-11, 15, 17-19 and 23 is/are rejected.
- 7) ☒ Claim(s) 12-14, 16, 20-22 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Page No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Page No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Invention III, claims 9-24, in the reply filed on 12 April 2007 is acknowledged.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 7 October 2003 was filed. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Misawa et al. (US Patent 6,809,764) in view of Nakashima et al. (US Patent 6,778,215).

7. With regard to claim 9 Misawa et al. discloses an electronic camera comprising:

an n:1 (n is a natural number not less than 3) interlace read type imaging element which can read electric charges of a plurality of two-dimensionally arranged photodiodes to the outside through a transfer path (FIGS. 24-33, column 18 lines 39-52);

a conversion portion which converts a signal read by the signal read portion into a video signal (signal processing section 10B, FIG. 1, column 9 line 58 – column 10 line 65).

Misawa et al. fails to disclose an unnecessary electric charge flushing portion used to transfer unnecessary electric charges stored in the transfer path at a normal speed through the transfer path;

a signal read portion which reads the electric charges of the photodiodes to the outside of the imaging element after flushing the unnecessary electric charges; and

wherein the unnecessary electric charge flushing portion transfers the unnecessary electric charges stored in the transfer path at a normal speed through the transfer path in a period

after end of exposure of the imaging element before reading the electric charges of the photodiode to the transfer path.

Nakashima et al. disclose an unnecessary electric charge flushing portion used to transfer unnecessary electric charges stored in the transfer path at a normal speed through the transfer path (column 7 lines 33-47);

a signal read portion which reads the electric charges of the photodiodes to the outside of the imaging element after flushing the unnecessary electric charges (column 4 lines 19-31); and

wherein the unnecessary electric charge flushing portion transfers the unnecessary electric charges stored in the transfer path at a normal speed through the transfer path in a period after end of exposure of the imaging element before reading the electric charges of the photodiode to the transfer path (FIG. 2, column 4 lines 19-31) [since there is nothing to compare normal to, the speed of the flushing is considered normal speed].

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the electronic camera of Misawa et al. to include the flushing operation taught by Nakashima et al. in order to reduce smear and blooming errors in the image (Nakashima et al, column 1 line 51 – column 2 line 2).

8. Claim 17 is rejected under the same analysis as claim 9.

9. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Misawa et al. (US Patent 6,809,764) in view of Nakashima et al. (US Patent 6,778,215) as applied to claims 9 and 17 above, and further in view of Abe (US Patent 6,700,609).

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10. With regard to claim 10 Misawa et al. and Nakashima et al. disclose the electronic camera according to claim 9, but fail to disclose further comprising a clamp portion which clamps a black level of the video signal while the unnecessary electric charge flushing portion flushes the unnecessary electric charges.

Abe discloses a clamp portion which clamps a black level of the video signal while the unnecessary electric charge flushing portion flushes the unnecessary electric charges (FIG. 4, column 6 lines 9-24) [the clamping is performed during the frame period, like the flushing portion of Misawa et al. and Nakashima et al. is performed during the frame period and thus they are performed during the same general time frame, the frame period].

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the electronic camera of Misawa et al. and Nakashima et al. to include the clamping operation of Abe in order to remove dark current from an image, thus enhancing the output image (Abe, column 1 lines 24-40).

11. Claim 18 is rejected under the same analysis as claim 10.

12. Claims 11 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Misawa et al. (US Patent 6,809,764) in view of Nakashima et al. (US Patent 6,778,215) and Abe (US Patent 6,700,609) as applied to claims 10 and 18 above, and further in view of Imaide et al. (US Patent 4,556,911).

13. With regard to claim 11 Misawa et al, Nakashima et al, and Abe disclose the electronic camera according to claim 10, but fail to disclose wherein the unnecessary electric charge

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flushing portion determines the period to transfer the unnecessary electric charges in accordance with brightness of an object.

Imaide et al. disclose the unnecessary electric charge flushing portion determines the period to transfer the unnecessary electric charges in accordance with brightness of an object (column 10 lines 41-46).

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the electronic camera of Misawa et al, Nakashima et al, and Abe to include the consideration of brightness taught by Imaide et al. in order to reduce noise when there is low brightness cause by the sweeping function itself (Imaide et al, column 10 lines 41-46).

14. Claim 19 is rejected under the same analysis as claim 11.

15. Claims 15 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Misawa et al. (US Patent 6,809,764) in view of Nakashima et al. (US Patent 6,778,215) as applied to claims 9 and 17 above, and further in view of Imaide et al. (US Patent 4,556,911).

16. Claims 15 and 23 are rejected under the same analysis as claim 11.

Allowable Subject Matter

17. Claims 12-14, 16, 20-22, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

18. The following is a statement of reasons for the indication of allowable subject matter: There is no disclosure in the prior art of shorting the flushing period during a rapid sequence

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mode as per claims 12, 16, 20, and 24. There is no disclosure in the prior art of determining the flushing period based on the time to stabilize the clamp as per claims 13, 14, 21, and 22.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam L. Henderson whose telephone number is 571-272-8619. The examiner can normally be reached on Monday-Friday, 7am to 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc-Yen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ALH
22 June 2007



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